

REMARKS

In the present amendment, claim 13 has been amended and new claims 17 and 18 have been added. Accordingly, claims 1, 3-13 and 15-18 are pending in the application, with claims 1, 13, 14, and 15 being independent claims.

Applicants note that claim 13 has been amended by reciting that “the mixing ratio of the solder particles is less than or equal to 30wt%,” as also recited in present claim 1. Furthermore, claim 13 has been added to better conform with idiomatic English and standard U.S. practice.

Applicants further note that new independent claims 17 and 18 correspond to independent claims 1 and 13, but recite the additional feature that the particle diameter of the solder particles is 35 μm or less. Support for new claims 17 and 18 can be found in the originally filed specification, e.g., at page 5, paragraph [0011].

No new matter has been added.

Response to Rejection under 35 U.S.C. § 103(a)

The Office Action makes the following claim rejections under 35 U.S.C. § 103(a):

- claims 1-12, as allegedly being unpatentable over WO 03/026835 to Saito et al., making specific references to its U.S. national stage application U.S. 2004/0259129, hereinafter “SAITO,” in view of U.S. 2003/0047034 to Ono et al., hereinafter “ONO;” and
- claims 13-16, as allegedly being unpatentable over SAITO.

With respect to present claim 1, the Office Action alleges that SAITO discloses all elements of the claim, except that “SAITO does not teach a mixing ratio of the solder particles is less than or equal to 30wt%.” (Office Action, page 4, lines 17-18). The Action contends that ONO teaches the deficiency of SAITO, asserting that “ONO teaches a solder paste (paragraph

15) composed of fine tin alloy particles (paragraph 0042) dispersed in an organic compound (paragraph 0043), where ratio is used of 0.1-100 grams of solder metal to 100 grams of dispersing medium,” which would cover the claimed range of “less than 30wt%” (see Office Action, page 4, last paragraph – page 5, first paragraph).

Applicants respectfully disagree with the Examiner’s interpretation of ONO. The invention in ONO is not directed to a specific “solder paste,” but to a method of making fine metal particles that can be used, e.g, in a solder paste. Accordingly, the ratio of 0.1-100 discussed by the Office Action is the ratio of metal to dispersing medium in the reaction mixture for making the fine metal particles, and not the ratio of the components in a solder paste. We further note that Example 33 in ONO, which discloses a solder paste with the manufactured fine metal particles, has an amount of 89 g solder particles based on 100 g total composition. Accordingly, ONO does not teach a solder composition having less than 30wt% metal particles, and rather teaches away from the presently claimed invention. Therefore, ONO does not remedy or suggest the deficiency of SAITO.

Applicants further note that claims 3-12 are dependent from claim 1 and, at least for the same reasons, are not obvious over SAITO in view of ONO as claim 1.

In view of the above, withdrawal of the obviousness rejection of claims 1-12 is respectfully requested.

Concerning the rejection of claims 13-16 over SAITO, Applicants note that in an attempt to advance prosecution of the present application and without expressing agreement with or acquiescence to the rejection, independent claim 13 has been amended by adding the feature that “the mixing ratio of the solder particles is less than or equal to 30wt%,” as also recited in present

claim 1. Applicants note that claims 15-16 are dependent from claim 13 and accordingly benefit from the amendment of claim 13. Claim 14 has previously been cancelled.

Applicants emphasize that SAITO does not teach or suggest a mixing ratio of the solder particles of less than or equal to 30wt%, as also admitted by the Office Action. Moreover, as pointed out above, the combination of SAITO with ONO does not lead to or suggest the presently claimed invention.


Accordingly, in view of the amendment of claim 13 and presented arguments, withdrawal of the rejection of claims 13-16 over SAITO is respectfully requested as well.

CONCLUSION

In view of the foregoing amendments and remarks, the Examiner is respectfully requested to reconsider the objections and rejections of record, and allow each of the pending claims.

If any issues yet remain which can be resolved by telephone, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Respectfully Submitted,
Isao SAKAMOTO et al.


Bruce H. Bernstein
Reg. No. 29,027

Stephen M. Roylance
Reg. No. 31,296

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GREENBLUM & BERNSTEIN, P.L.C.
1950 Roland Clarke Place
Reston, VA 20191
(703) 716-1191